

What is claimed is:

1. A method for determining the ratio of oxidized cardiac troponin I to reduced cardiac troponin I in a patient sample, comprising:

a) contacting the patient sample with

i) a first antibody that specifically binds to both oxidized and reduced cardiac troponin I, wherein said oxidized and reduced cardiac troponin I bind to the first antibody in an amount proportional to their ratio in the sample, and

ii) a second antibody that specifically binds to one of oxidized or reduced cardiac troponin I, whereby said first and second antibodies form a complex comprising one of said oxidized or reduced cardiac troponin I present in said sample, and do not form a complex comprising the other of said oxidized or reduced cardiac troponin I present in said sample; and

b) generating a signal corresponding to the amount of said complex formed and relating said signal to said ratio.

2. A method according to claim 1, wherein one of said first or second antibodies is attached to a signal generating element, and the other of said first or second antibodies is attached to a solid phase.

3. A method according to claim 2, wherein said signal generating element comprises an enzyme, a colloidal metal particle, a latex particle, or a silica particle.

4. A method according to claim 1, wherein said signal is detected by fluorometric measurement.

5. A method according to claim 1, wherein said signal is detected by absorbance measurement.
6. A method according to claim 1, wherein said signal is detected by pH measurement.
7. A method according to claim 1, wherein said signal is generated from a separate component that specifically binds to said complex and that is attached to a signal generating element.
8. A method according to claim 1, wherein said relating step comprises comparing said signal to a standard curve calculated using known ratios of oxidized and reduced cardiac troponin I.
9. A method according to claim 1, wherein said relating step comprises the use of a normalizing factor calculated using known ratios of oxidized and reduced cardiac troponin I.
10. A method according to claim 1, wherein said patient sample is contacted with said first and second antibodies simultaneously in the same vessel.
11. A method according to claim 1, wherein said first antibody has a binding affinity for oxidized cardiac troponin I that is at least five times greater than its affinity for reduced cardiac troponin I.
12. A method according to claim 1, wherein said first antibody has a binding affinity for oxidized cardiac troponin I that is at least ten times greater than its affinity for reduced cardiac troponin I.
13. A method according to claim 1, wherein said first antibody has a binding affinity for oxidized cardiac

troponin I that is at least fifty times greater than its affinity for reduced cardiac troponin I.

14. A method according to claim 1, wherein said first antibody has a binding affinity for reduced cardiac troponin I that is at least five times greater than its affinity for oxidized cardiac troponin I.

15. A method according to claim 1, wherein said first antibody has a binding affinity for reduced cardiac troponin I that is at least ten times greater than its affinity for oxidized cardiac troponin I.

16. A method according to claim 1, wherein said first antibody has a binding affinity for reduced cardiac troponin I that is at least fifty times greater than its affinity for oxidized cardiac troponin I.

17. A method according to claim 1, wherein said ratio is further related to the occurrence of a myocardial infarction in said patient.